GLOUCESTER, MASS.-N.H.-ME.

NATIONAL WETLANDS INVENTORY

30 X 60 MINUT SERIES (WETLANDS)

ATLANTIC OCEAN

SCALE 1:100 000

WETLAND LEGEND

M MARINE
1 SUBTIDAL
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
RF Reef

M MARINE
2 INTERTIDAL
AB Aquatic Bed
RF Reef
FL Flat
RS Rocky Shore
BB Beach/Bar

E ESTUARINE
1 SUBTIDAL
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
RF Reef

E ESTUARINE
2 INTERTIDAL
AB Aquatic Bed
RF Reef
FL Flat
EM Emergent
SS Scrub/Shrub
FO Forested

R RIVERINE
1 TIDAL
EM Emergent (Nonpersistent)
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
FL Flat
EM Emergent
RS Rocky Shore
BB Beach/Bar

R RIVERINE
2 LOWER PERENNIAL
EM Emergent (Nonpersistent)
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
FL Flat
EM Emergent
RS Rocky Shore
BB Beach/Bar

R RIVERINE
3 UPPER PERENNIAL
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
FL Flat
EM Emergent
RS Rocky Shore
BB Beach/Bar

R RIVERINE
4 INTERMITTENT
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
FL Flat
EM Emergent
RS Rocky Shore
BB Beach/Bar

L LACUSTRINE
1 LIMNETIC
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed

L LACUSTRINE
2 LITTORAL
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
FL Flat
RS Rocky Shore
BB Beach/Bar
EM Emergent (Nonpersistent)

P PALUSTRINE
NO SUBSYSTEMS
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
FL Flat
ML Moss/Lichen
EM Emergent
SS Scrub/Shrub
FO Forested

MICROFICHE INDEX
GLOUCESTER (BOSTON NE)

EAST

SYSTEM
SUBSYSTEM
CLASS

GLOUCESTER, MASS.-N.H.-ME.
1980

1:100 000-scale
wetland map of

Gloucester
MASS.-N.H.-ME.

30 X 60 MINUTE QUADRANGLE SHOWING

- Wetland classifications
- Highways, roads and other manmade structures
- Water features
- Geographic names

1980

Produced by the United States Fish and Wildlife Service
Wetland classifications from 1:80 000-scale black and white aerial photographs taken 1977 and other source data
Projection and 10 000-meter grid: zone 19, Universal Transverse Mercator
1927 North American Datum
To place on the predicted North American Datum 1983, move the projection lines 4 meters south and 43 meters west

SPECIAL NOTE
This map was prepared primarily to interpret patterns of high density wetland vegetation and deepwater habitats as discernible on aerial photographs. Accordingly, the classification of wetlands and deepwater habitats and their boundaries shown on this map are subject to modification as more detailed information is acquired. Some small wetland areas may not be shown, and some of the mapped units may contain inclusions of smaller areas of wetlands or deepwater habitats not shown. Certain wetlands may require on-site inspection to accurately determine their presence or absence, especially those that occur on hydric soils. Precise boundaries between wetlands and uplands may require on-site inspection. Users should be aware of these limitations when using this map for purposes such as habitat management or land-use planning. Some of these limitations may be addressed in the publication associated with this map. Consult this publication for additional information concerning this map and its preparation.

BASE MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

CONVERSION TABLE

Meters	Feet
1	3.28
2	6.56
3	9.84
4	13.12
5	16.40
6	19.69
7	22.97
8	26.25
9	29.53
10	32.81
20	65.62
30	98.43
40	131.23
50	164.04
60	196.85
70	229.66
80	262.47
90	295.27
100	328.08
200	656.17
300	984.25
400	1312.34
500	1640.42
600	1968.50
700	2296.59
800	2624.67
900	2952.76
1000	3280.84

To convert feet to meters, multiply by 0.3048
To convert feet to kilometers, multiply by 0.0003048

DECLINATION DIAGRAM

ADJOINING MAPS

1 Concord
2 Lowell
3 Boston
4 Milton
5 Providence
6 Newport
7 Portsmouth
8 Isles of Shoals

Topographic Map Symbols

Primary highway, hard surface
Secondary highway, hard surface
Light duty road, improved unpaved surface
Other road or unpaved trail
Route marker: Interstate, U.S., State
Railroad: standard gage, narrow gage
Bridge, overpass, underpass
Tunnel: road, railroad
Built-up area, locality, elevation
Airport, landing field, landing strip
National boundary
State boundary
County boundary
Reservation, Indian reservation boundary
Land grant boundary
U.S. public lands survey: ridge, township, section
Range, township, section line, generalized
Fence or miscellaneous line
Dam, dam with lock
Cemetery, building
Windmill, water well, spring
Mine shaft, adit or drift, mine quarry, gravel pit
Campground, picnic area, U.S. location monument
Ruins, cliff dwelling
Division bird preserve, refuge/retreat
Rapids, large and small; falls, large and small

A complete elevation/topographic map is available on request

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RESTON, VIRGINIA 22092

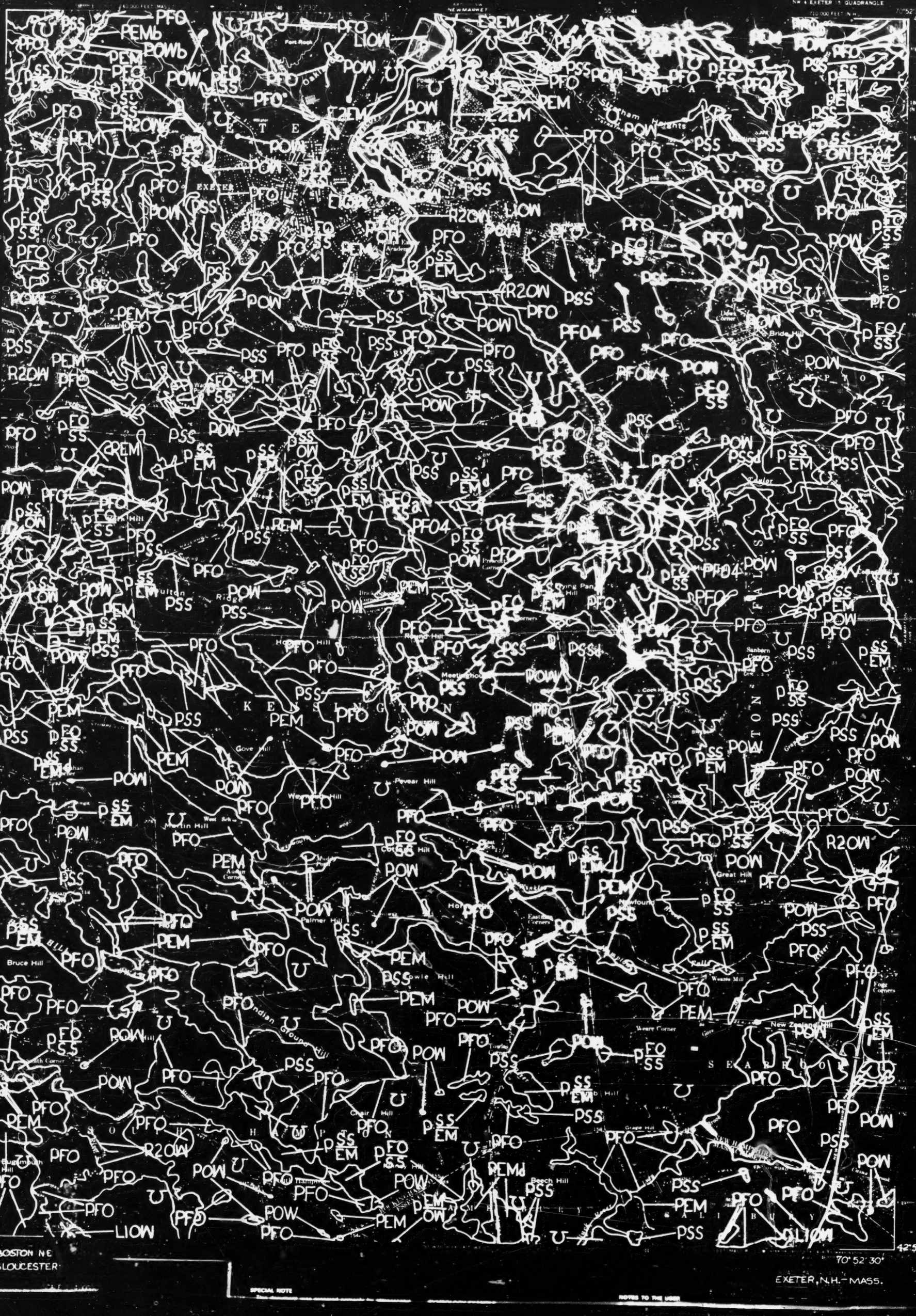
3 7 9 3 5 3

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

EXETER QUADRANGLE
NEW HAMPSHIRE-MASSACHUSETTS
7.5 MINUTE SERIES (TOPOGRAPHIC)



BOSTON N E
GLOUCESTER

70°52'30"

42°52'30"

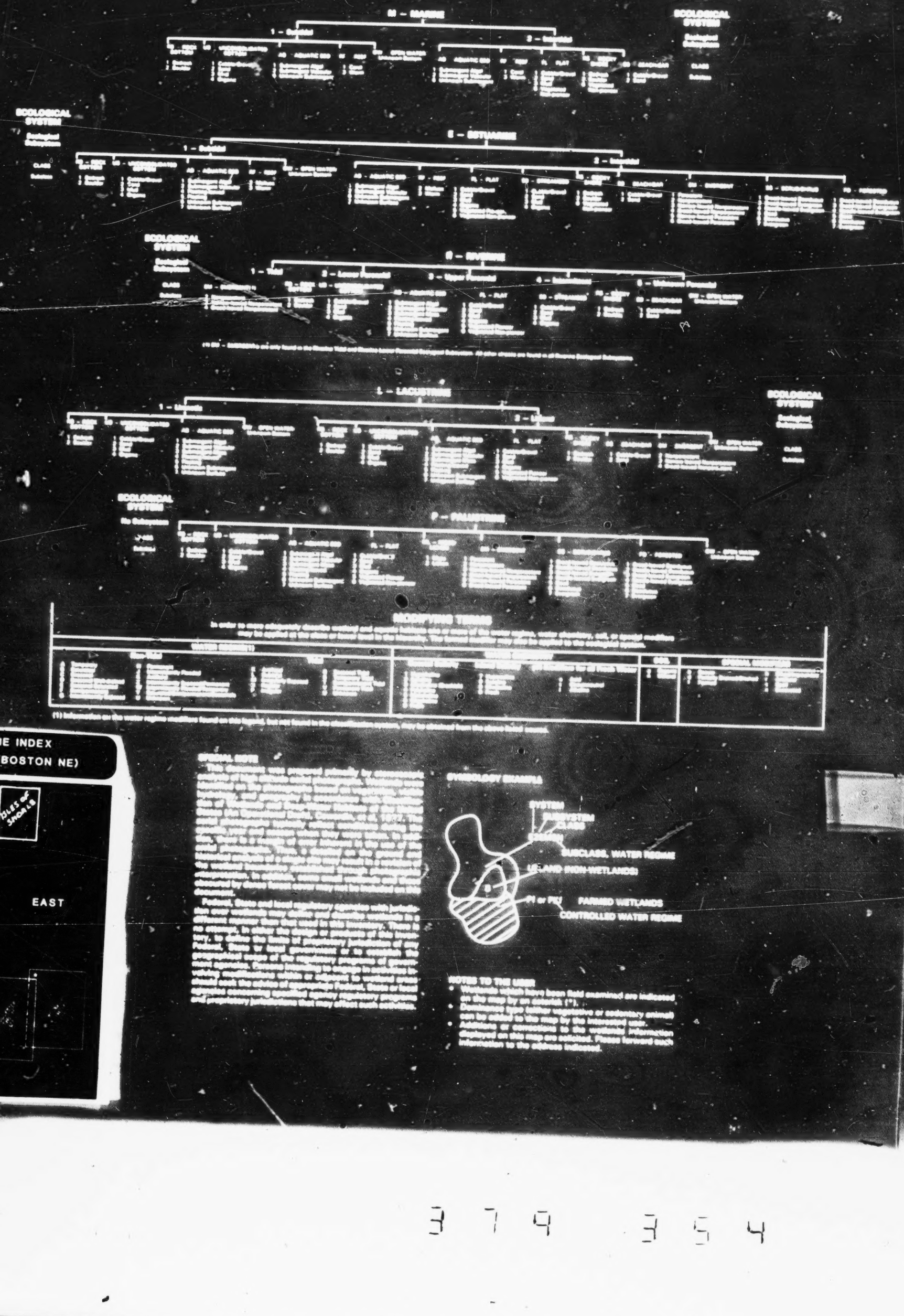
EXETER, N.H.-MASS.

SPECIAL NOTE

NOTES TO THE USER

(2)

WETLAND LEGEND



MICROFICHE INDEX
GLOUCESTER (BOSTON NE)

379 354

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES DEPARTMENT OF THE ARMY CORPS OF ENGINEERS

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

HAMPTON QUADRANGLE
NEW HAMPSHIRE - ROCKINGHAM CO
7.5 MINUTE SERIES (TOPOGRAPHIC)

BOSTON NE
GLOUCESTER

HAMPTON, N H.

70°45

42°52'30"

SPECIAL NOTE

This document was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible

SYSTEMOLOGY EXAMPLE

NOTES TO THE USER

- Wetlands which have been field examined are indicated on the map by an asterisk (*)
- Dominance type (either vegetative or sedentary animal)

C-2

WETLAND LEGEND

U – Primarily represents upland areas, but may include undisturbed wetlands such as man-modified areas, non-photo-discernable areas and/or unclassified wetlands.

M – MARINE

E – ESTUARINE

R – RIVERINE

L – LACUSTRINE

P – PALUSTRINE

ECOLOGICAL SYSTEM

CLASS

MODIFYING TERMS

In order to more adequately describe wetland and deepwater habitats, one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The water regime modifiers may also be applied to the ecological system.

(1) Information on the water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

MICROFICHE INDEX
GLOUCESTER (BOSTON, NE)

TABLE OF SHEETS

NW

EAST

SW

GENERAL NOTES

HYDROLOGY DIAGRAM

SYSTEM
SUBSYSTEM
CLASS

SUBCLASS, WATER REGIME

WETLAND (NON-WETLANDS)

FARMED WETLANDS

CONTROLLED WATER REGIME

NOTES TO THE USER

- Wetlands that have been field examined are indicated on the map by an asterisk (*).
- Dominant type of vegetation or cultivated crops can be added to the map by the trained user.
- Additional or corrected information concerning wetlands or deepwater habitats may be added. Please forward such information to the mapping center.

379 355

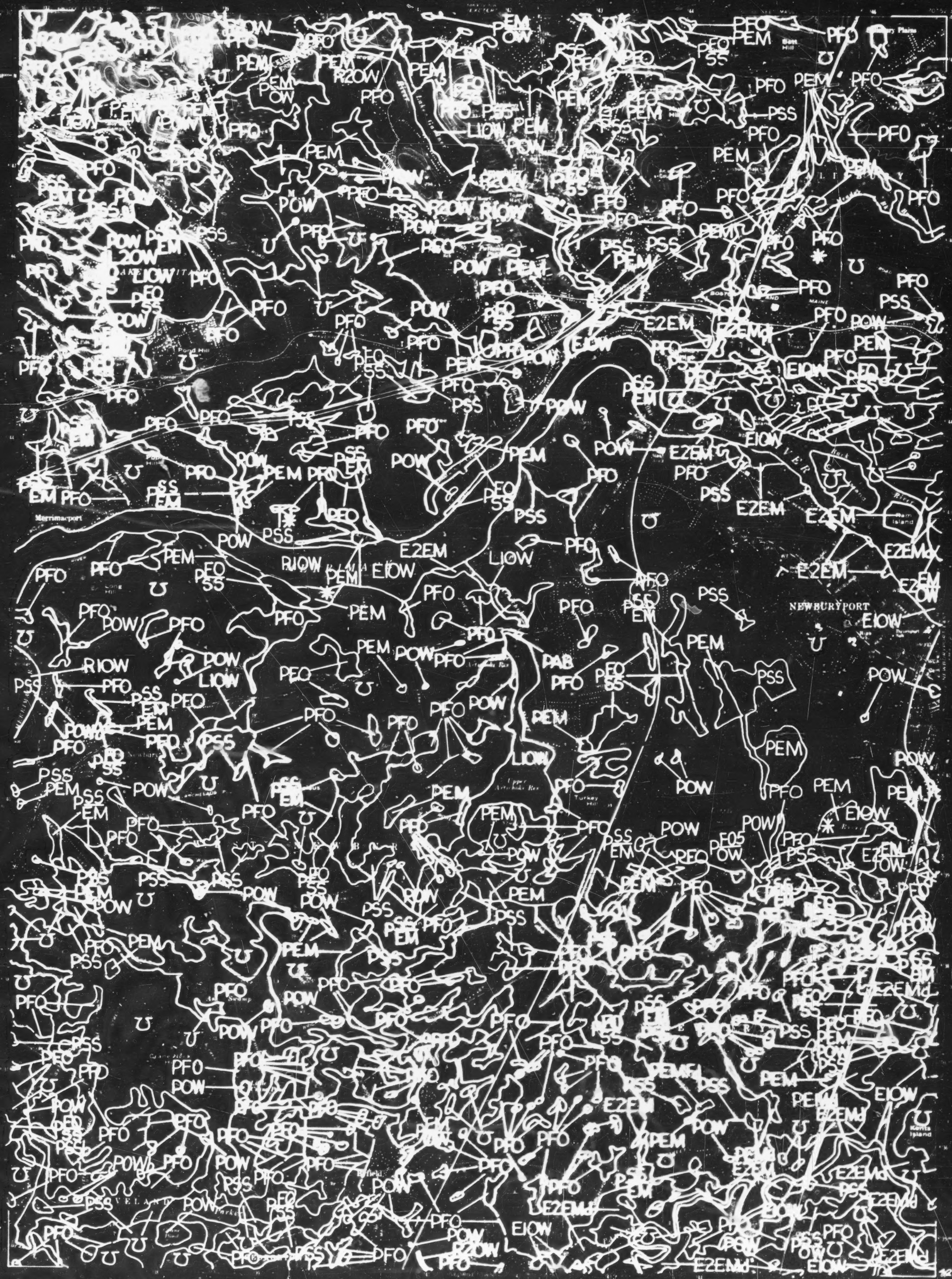
NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

NEWBURYPORT WEST QUADRANGLE
MASSACHUSETTS-NEW HAMPSHIRE
7.5 MINUTE SERIES (TOPOGRAPHIC)



BOSTON NE
GLOUCESTER

SPECIAL NOTE
This document was prepared primarily by stereoscopic

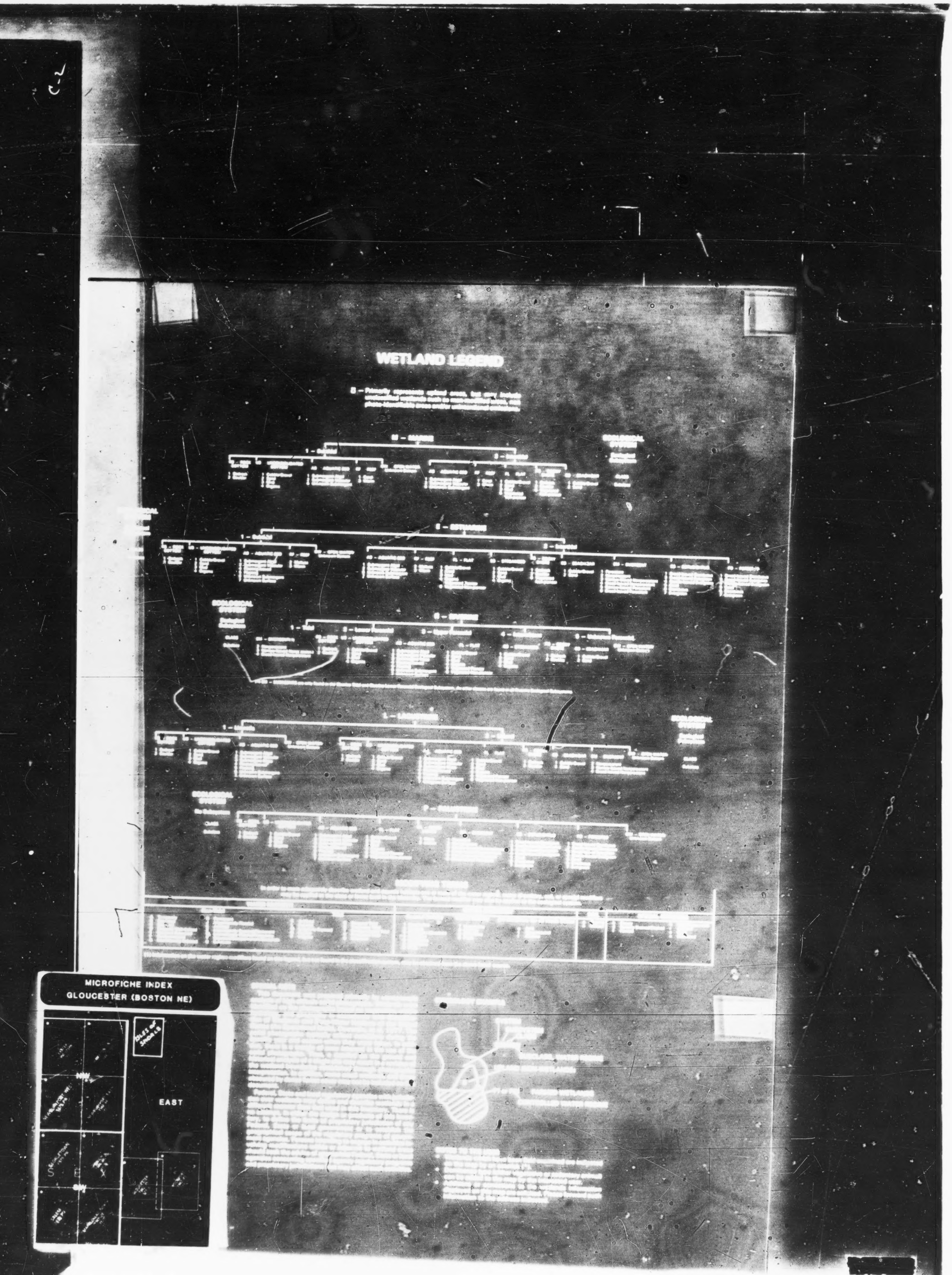
SYMBOLOGY EXAMPLE

NOTES TO THE USER
- Wetlands which have been hand-quantified are indicated

70°52'30"

42°45'

NEWBURYPORT WEST, MASS.-N.H.


WETLAND LEGEND
MICROFICHE INDEX
GLOUCESTER (BOSTON NE)
NW
EAST

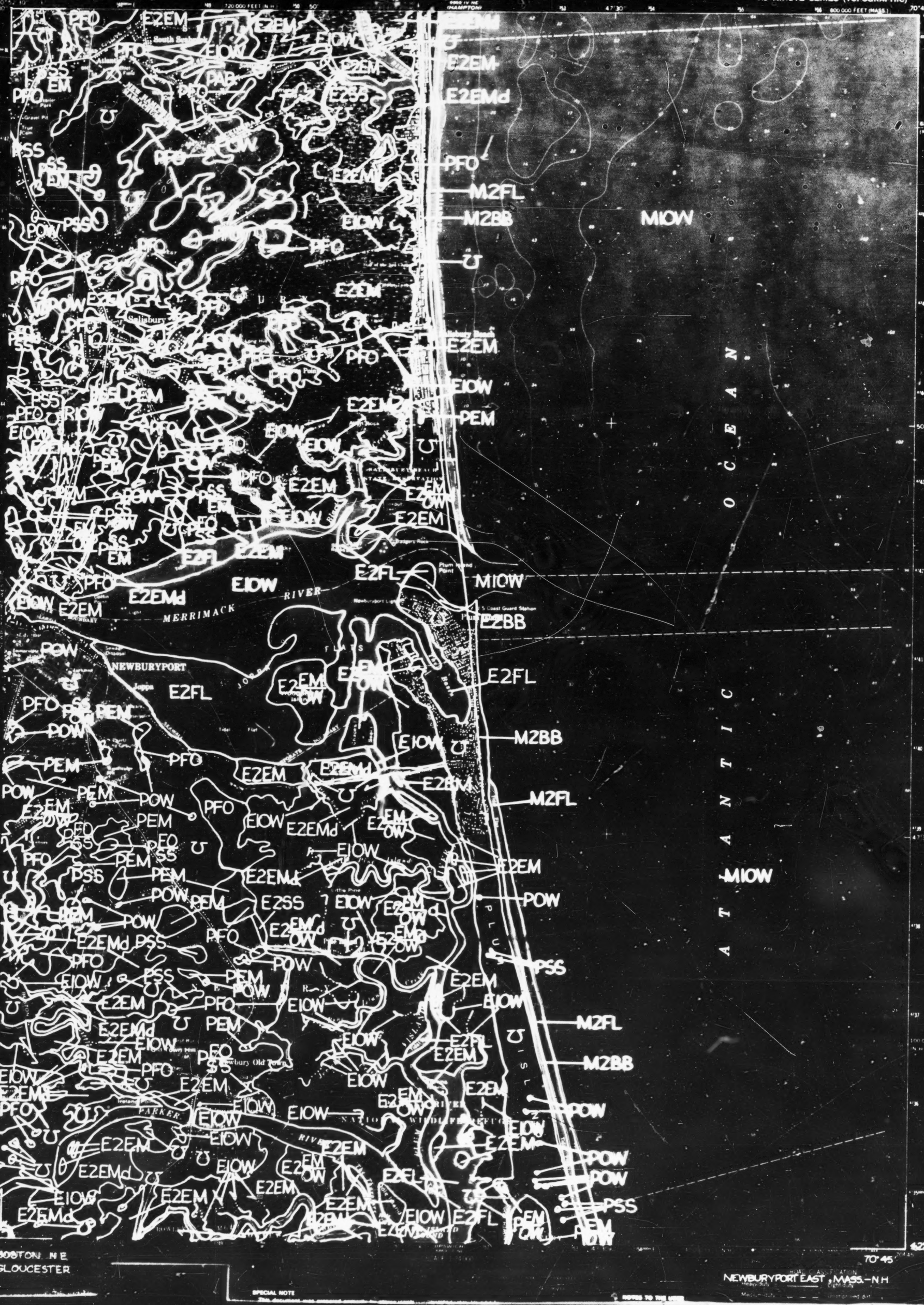
379 356

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

UNITED STATES DEPARTMENT OF THE INTERIOR
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

NEWBURYPORT EAST QUADRANGLE
MASSACHUSETTS – NEW HAMPSHIRE
7.5 MINUTE SERIES (TOPOGRAPHIC)



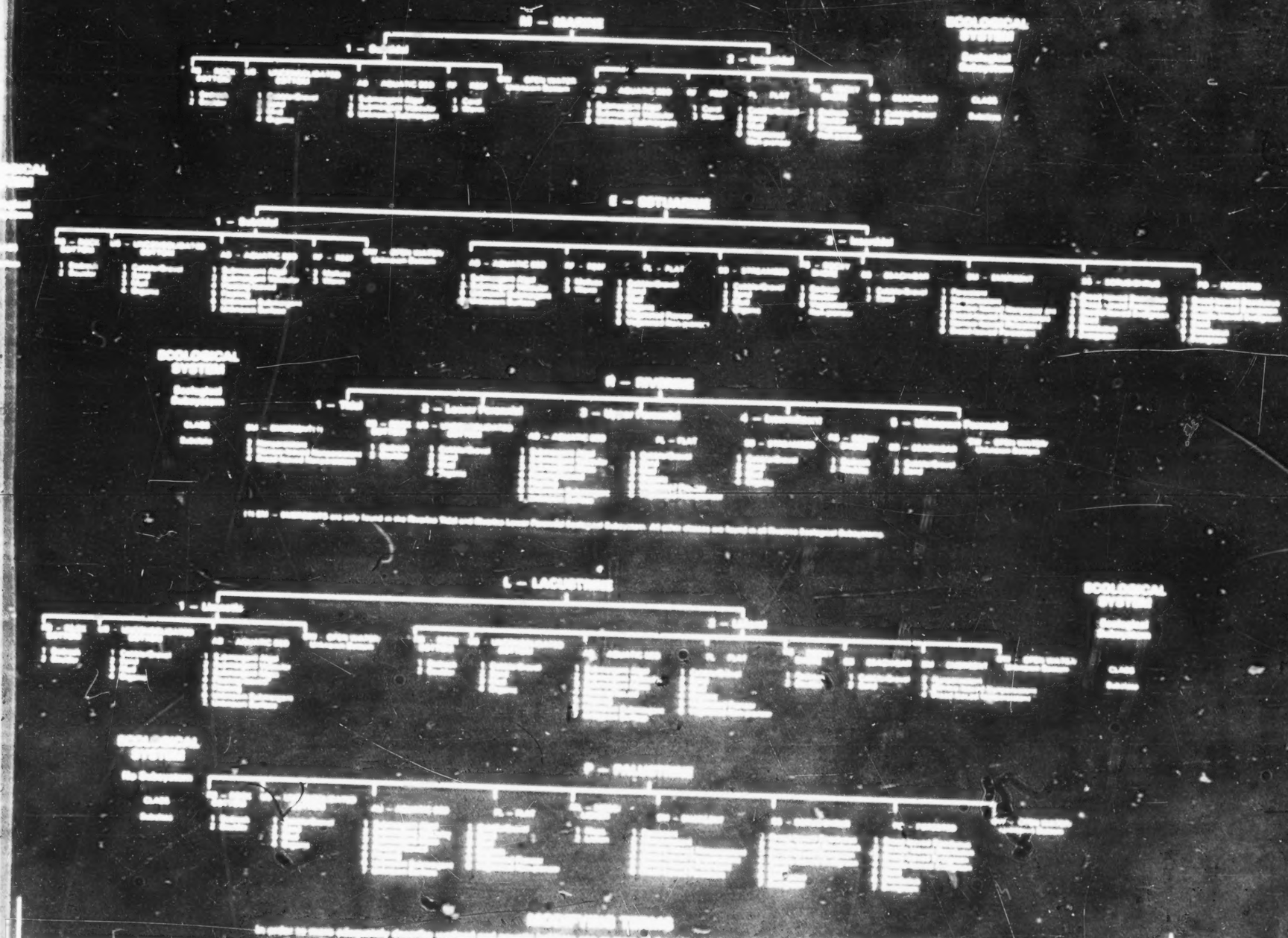
BOSTON NE
GLOUCESTER

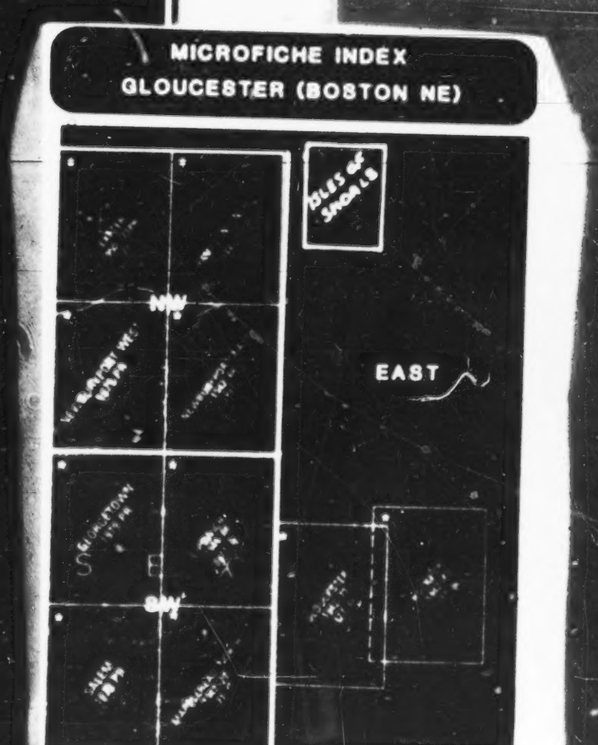
NEWBURYPORT EAST, MASS.-N.H.

SPECIAL NOTE

C-2

WETLAND LEGEND





379 357

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

ISLES OF SHOALS QUADRANGLE
MAINE—NEW HAMPSHIRE
7.5 MINUTE SERIES (TOPOGRAPHIC)

70°32'30"
43°02'30"

M1OW

K I T T E R Y

M2RS
POW
M1AB
M1AB
M2RS
M2RS
M2RS

M2RS
POW
M2RS
M2BB
M2BB
M2FL
M2RS
POW
M2RS
M2RS
M1AB
M2RS
M1AB
M2RS
POW
M2RS

MAINE
NEW HAMPSHIRE
YORK CO
ROCKINGHAM CO

R Y E

M1OW

A T L A N T I C O C E A N

M1OW

BOSTON N E
GLOUCESTER

SPECIAL NOTE
This document was prepared prima... analysis of high altitude aerial photographs. Wetlands were

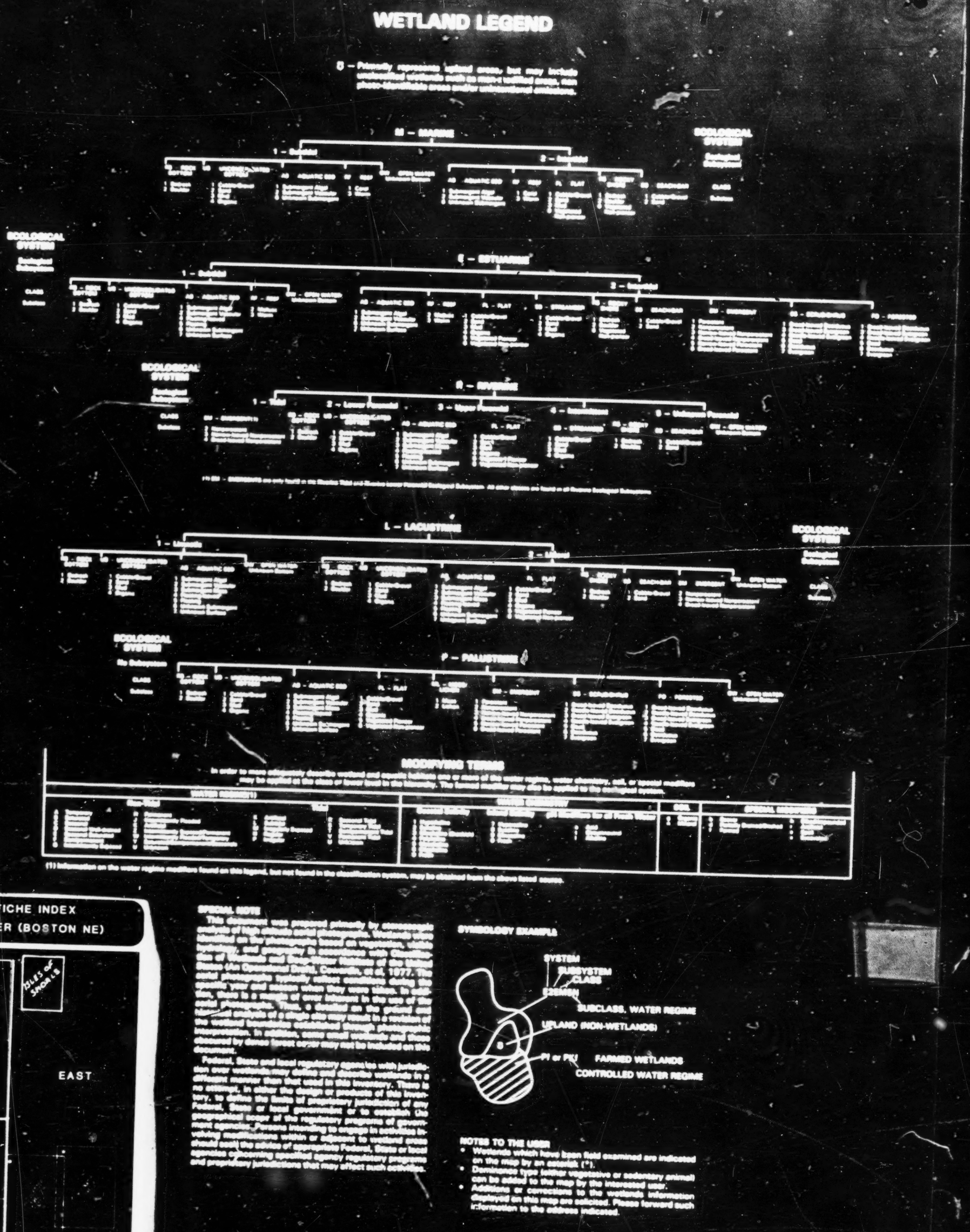
NOTES TO THE USER
* Wetlands which have been field examined are indicated on the map by an asterisk (*)

42°55'
70°32'

ISLES OF SHOALS, ME.-N.H.

C2

WETLAND LEGEND



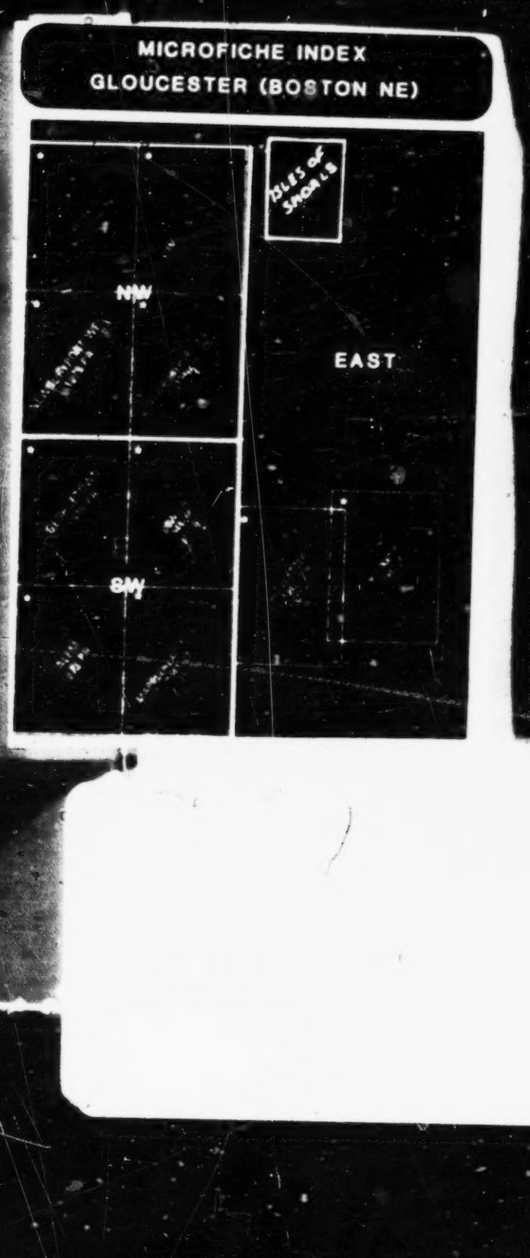
MODIFYING TERMS

In order to more adequately describe wetland and aquatic habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The listed modifiers may also be applied to any ecological system.

WATER REGIME (1)				WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS	
Non-tidal		Tidal		Salinity					
Permanently Flooded	Intermittently Exposed	Permanently Flooded	Intermittently Exposed	Hyperhaline	Euhaline	Mixohaline (Brackish)	Organic	Beaver	Partly Drained
Intermittently Flooded	Semipermanently Flooded	Subtidal	Irregularly Exposed					Diked/Impounded	Farmed
Artificially Flooded	Seasonally Flooded	Irregularly Flooded							

(1) Information on the water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

MICROFICHE INDEX
GLOUCESTER (BOSTON NE)



SPECIAL NOTE

This document was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and prevalence of hydrophytes. Some of the areas of wetlands and deepwater habitats of this inventory are classified differently than those of the National Wetlands Inventory (Cowardin, et al, 1977). The areas of wetlands and deepwater habitats of this inventory were delineated primarily without ground truthing, during the growing season and wetter than normal conditions were chosen. In addition, it is a margin of error inherent in the use of the aerial photographs. That is, detail on the ground and on the aerial photographs may be too small to be delineated at the scale of mapping. Accordingly, mapped units may contain inclusions of other wetland types. Small wetlands may not be identified and may be excluded from mapped areas. Some areas dominated by trees may not be included on this inventory.

Federal, State and local regulatory agencies with jurisdiction over wetlands may define and delineate wetlands in a different manner than that used in this inventory. There is no assurance that the areas mapped as wetlands on this inventory will be determined to be wetlands by the regulatory agencies. Furthermore, the exact locations, sizes and extents of wetlands in any specific site may differ from the depictions on this inventory. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, State or local agencies concerning specific agency regulatory programs and proprietary jurisdictions that may affect such activities.

SYMBOLOGY EXAMPLE

NOTES TO THE USER

- Wetlands which have been field examined are indicated on the map by an asterisk (*).
- Dominance type (active vegetative or sedentary animal) can be added to the map by the interested user.
- Additions or corrections to the wetlands information depicted on this map are solicited. Please forward such information to the address indicated.

379.364

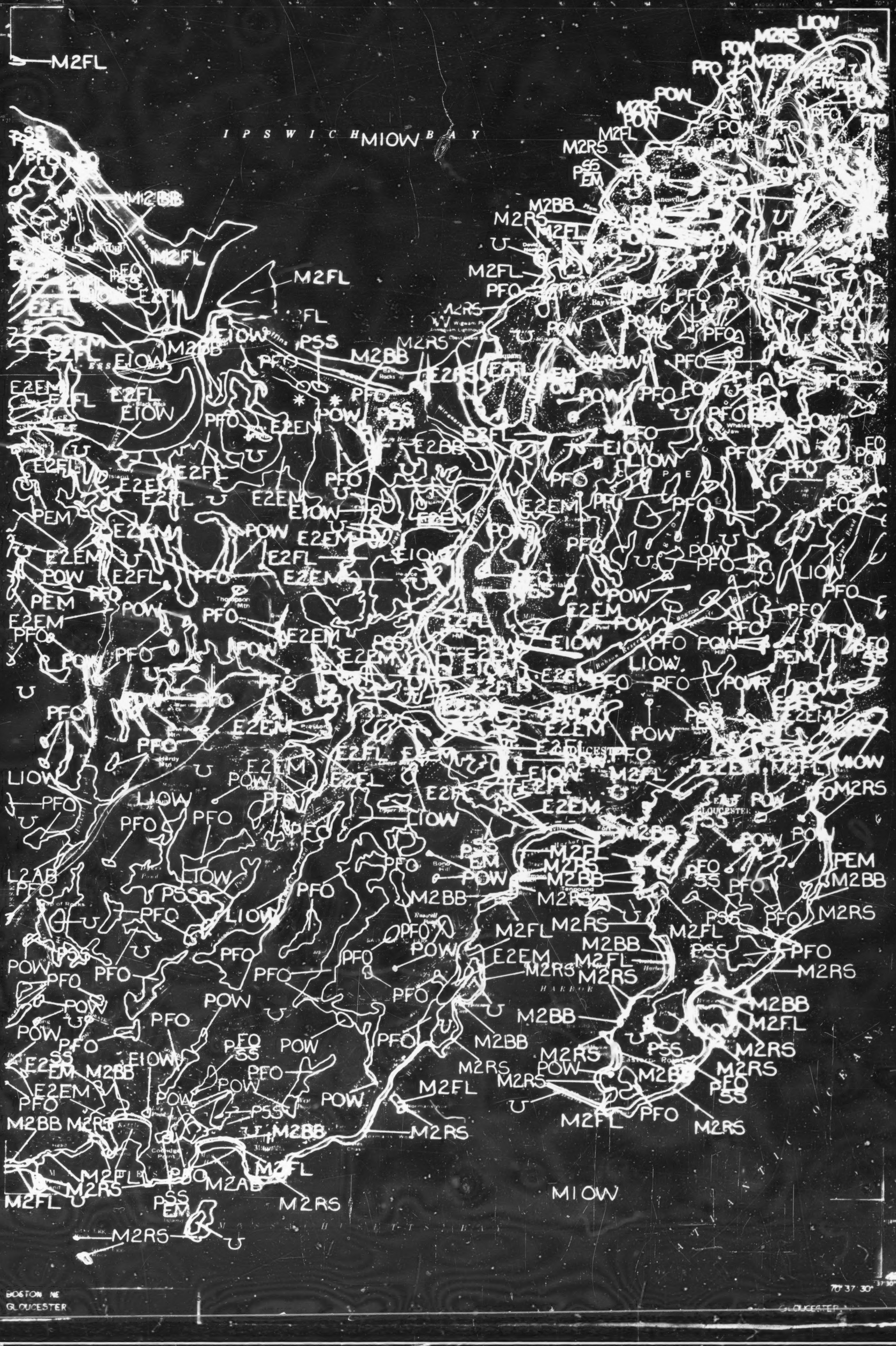
NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

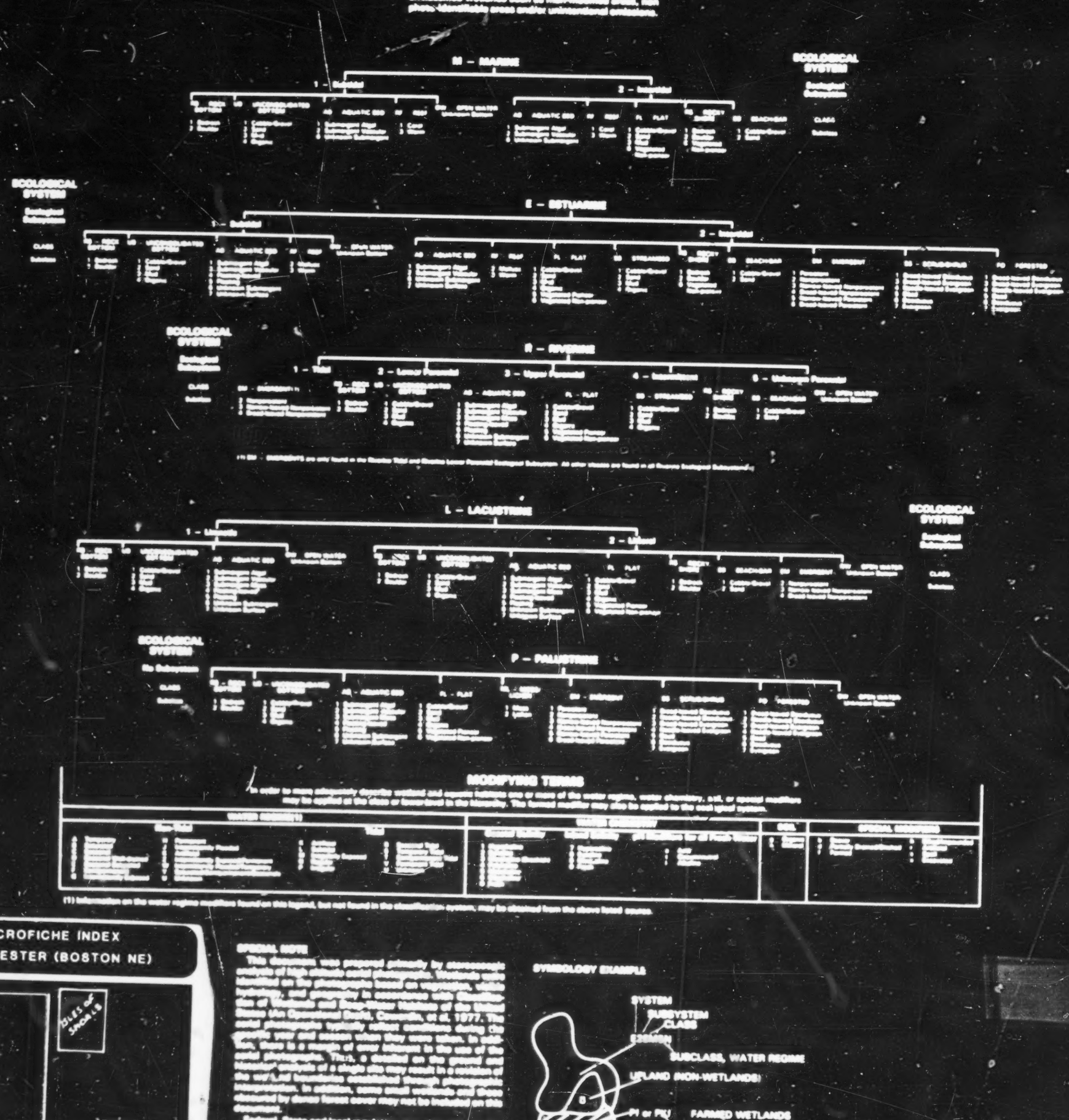
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

GLOUCESTER QUADRANGLE
MASSACHUSETTS - ESSEX CO
7.5 MINUTE SERIES (TOPOGRAPHIC)



BOSTON NE
GLOUCESTER

WETLAND LEGEND



MODIFYING TERMS

WATER REGIME(1)				WATER CHEMISTRY		SOIL	SPECIAL MODIFIERS

(1) Information on the water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

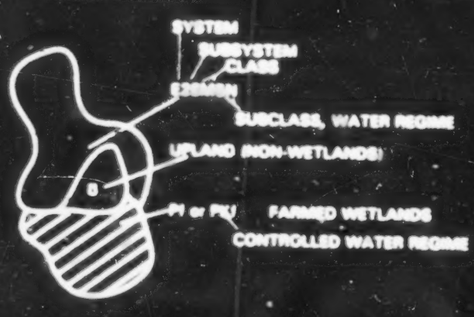
MICROFICHE INDEX
GLOUCESTER (BOSTON NE)

SPECIAL NOTE

This document was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography in accordance with the Classification of Wetlands and Deepwater Habitats of the United States (Ad Operational Draft, Cowardin, et al, 1977). This aerial photography typically reflects conditions during the growing year and season when they were taken. In addition, there is a margin of error inherent in the use of the aerial photographs. Thus, a detailed on the ground and/or aerial examination of a specific site may result in a variation of the wet/land boundaries established through photographic interpretation. In addition, some small wetlands and those obscured by dense forest cover may not be included on this document.

Federal, State and local regulatory agencies with jurisdiction over wetlands may define and delimit wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of the inventory, to define the limits of proprietary jurisdiction of any Federal, State or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, State or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

SYMBOLOGY EXAMPLE



NOTES TO THE USER

- Wetlands which have been field examined are indicated on the map by an asterisk (*).
- Corrections (new wetlands or boundary errors) can be added to this map by the interested user.
- Additions or corrections to the wetlands information depicted on this map are welcomed. Please forward such information to the address indicated.

3 7 9 3 6 2

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

ROCKPORT QUADRANGLE
MASSACHUSETTS – ESSEX CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

70°38'30" 42°42'30" 37'30" 35' 32'30" 70°31'

M1OW

M2RS
M2RS
U
M2RS
M2BB
M2RS
M2FL
M2BB
M2RS
M2BB
M2RS
M2RS
M2RS
M2BB
M2RS
PFO
POW
PEM
PSS
M2RS
E1OW
M2RS
PFO
E2EM
E1OW
PFO
M2BB
PFO
M2FL
M2BB
PEM
POW
M2RS
PSS
EM
M2RS
M2FL
POW
PFO
PSS
M2RS
U
M2FL

M2RS
U
M2RS
Flat Ground
M2RS
Dry Salvages

M1OW

Halibut Pt.
Folly Cove
Quarry
Hesp Pole Cove
Andrews Pt.
Pigeon Cove
Quarry
Quarry
Pigeon Hill
Mitchell Rock
Bartlett Rock
SANDY BAY
Avery Ledge
ROCKPORT
Pool Hill
Lookout Tower
Airfield
Loop Pond
CAPE ANNE
Great Hill
Clay Pit
Briar Swamp
Gravel Pit
Cape Pond
Lobdilly Cove
Thacher Island
Twin Lights
Gloucester Harbor Breakwater
GLOUCESTER
Ocean Head
Lighthouse
Straitsmouth Island
Gap Cove
Whale Cove
Gaffboat Island
Gravelbank Head
Milk Rock
OCEAN
ATLANTIC

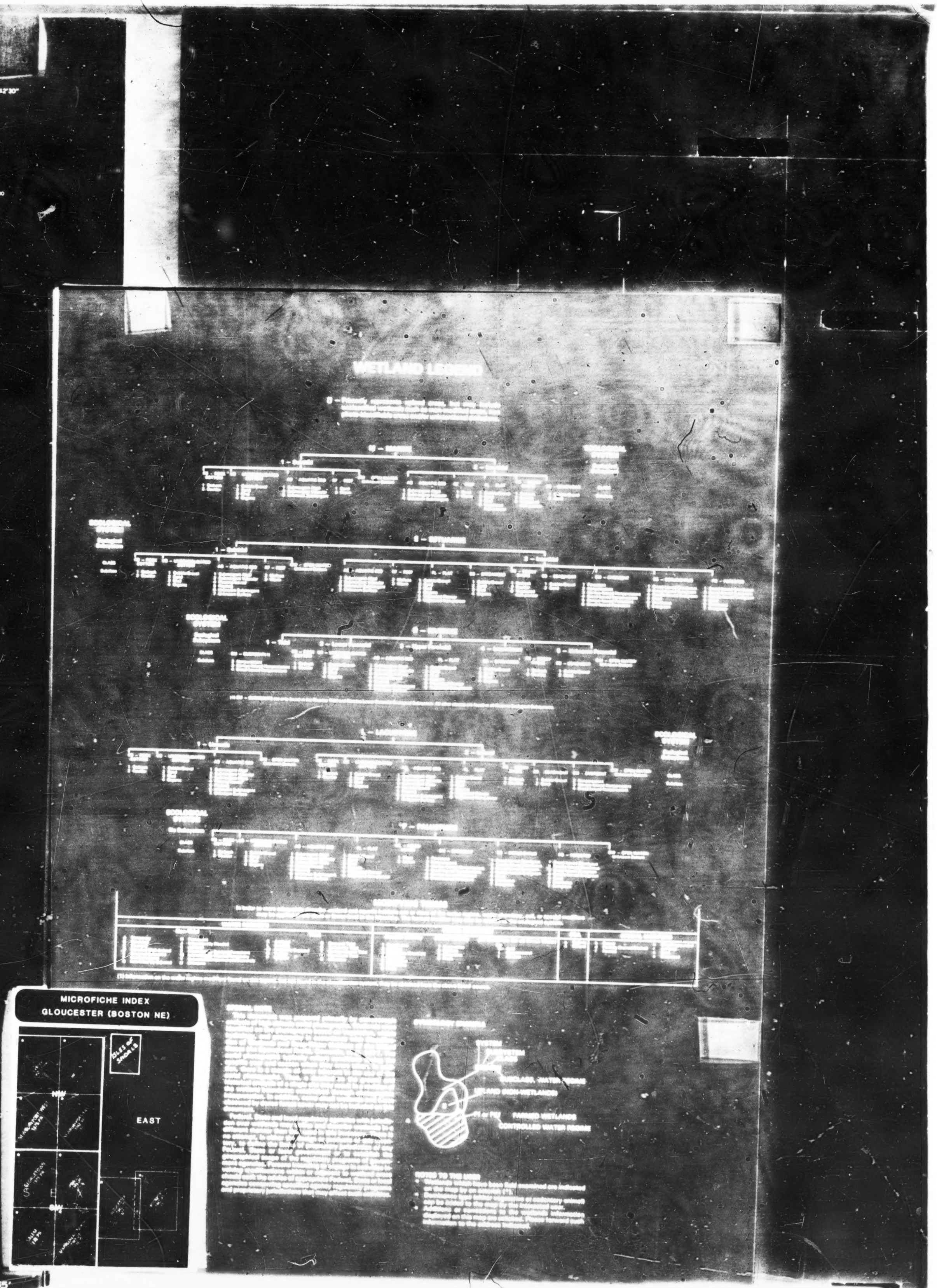
BOSTON N.E.
GLOUCESTER

SPECIAL NOTE

NOTES TO THE USER

70°31'

ROCKPORT, MASS.


WETLAND LEGEND
ECOLOGICAL
ECOLOGICAL
ECOLOGICAL
ECOLOGICAL
MICROFICHE INDEX
GLOUCESTER (BOSTON NE)
NW
EAST
SW
FARMED WETLANDS
CONTROLLED WATER REGIME

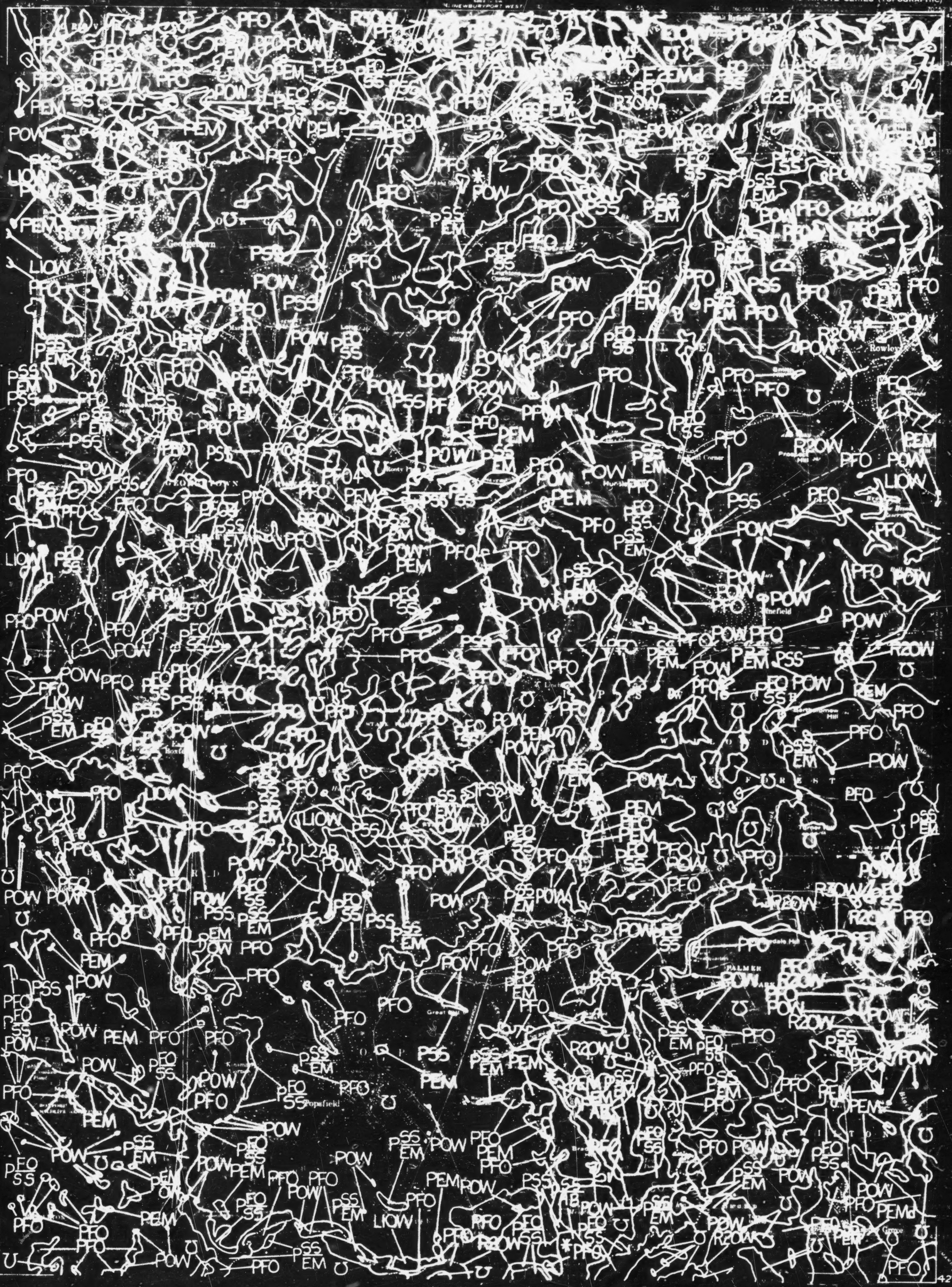
3 7 9 3 6 3

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NATIONAL WETLANDS INVENTORY

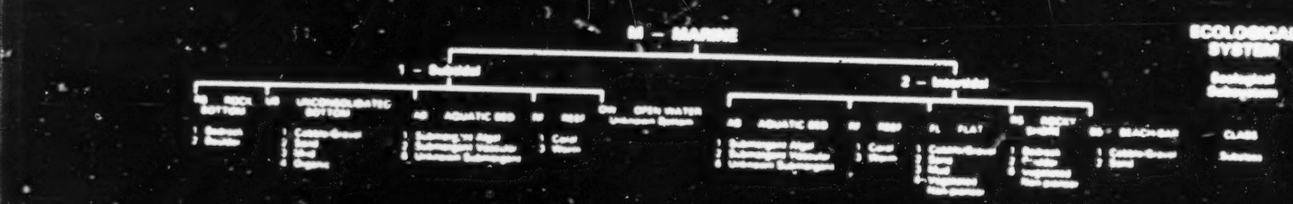
UNITED STATES DEPARTMENT OF THE INTERIOR
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

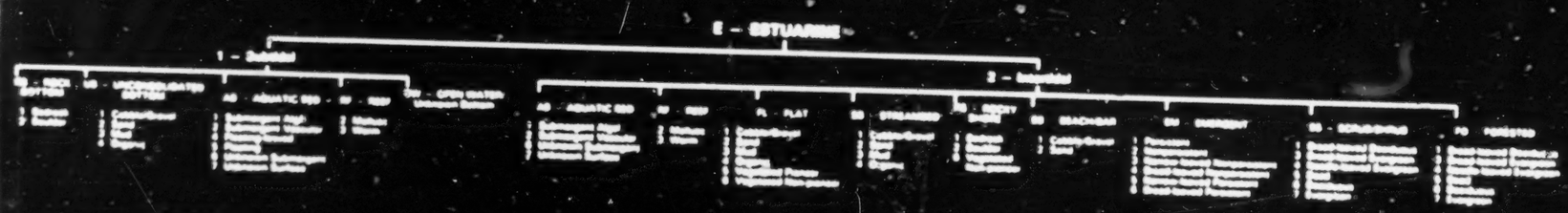
GEORGETOWN QUADRANGLE
MASSACHUSETTS - ESSEX CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

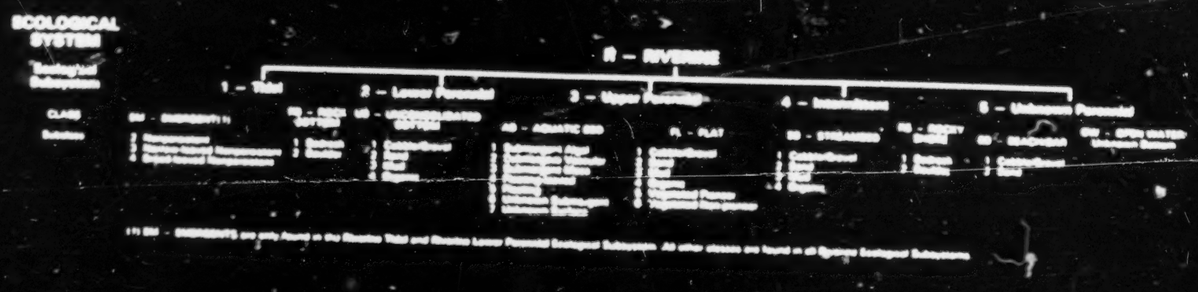

PFO
POW
PEM
PSS
R2OW
L1OW
L2AB
Rowley
Topsfield
Great Meadow
Hunts Pond
Bald Hill
Pine Hill
Pine Island
Bare Hill
Great Hill
Bald Hill
Pine Hill
Pine Island
Bare Hill
Great Hill
Pine Island
Bare Hill
Great Hill
Pine Island
Bare Hill
Great

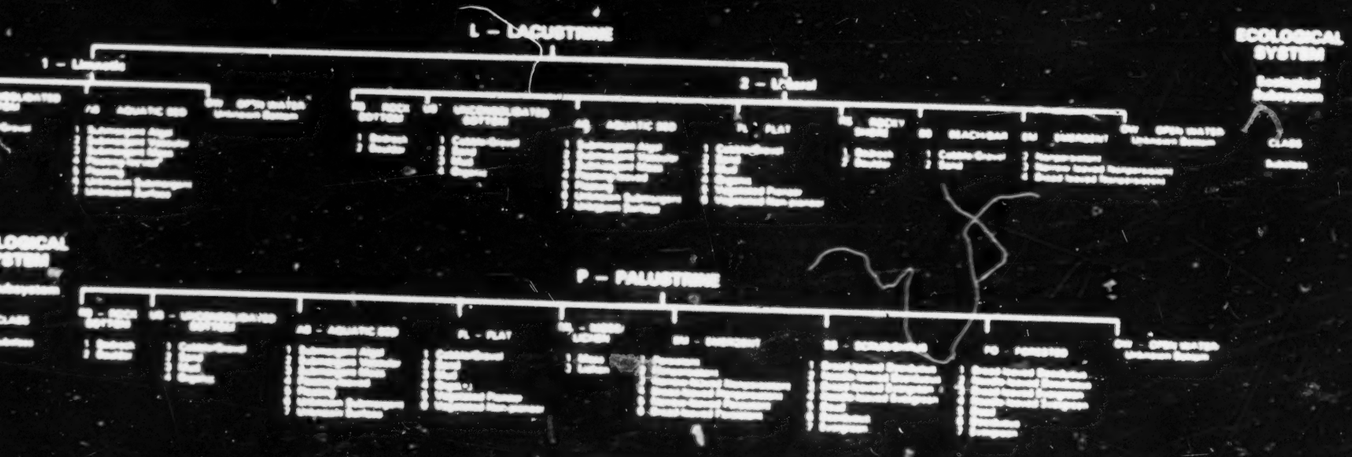
WETLAND LEGEND

U – Primarily represents upland areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions.







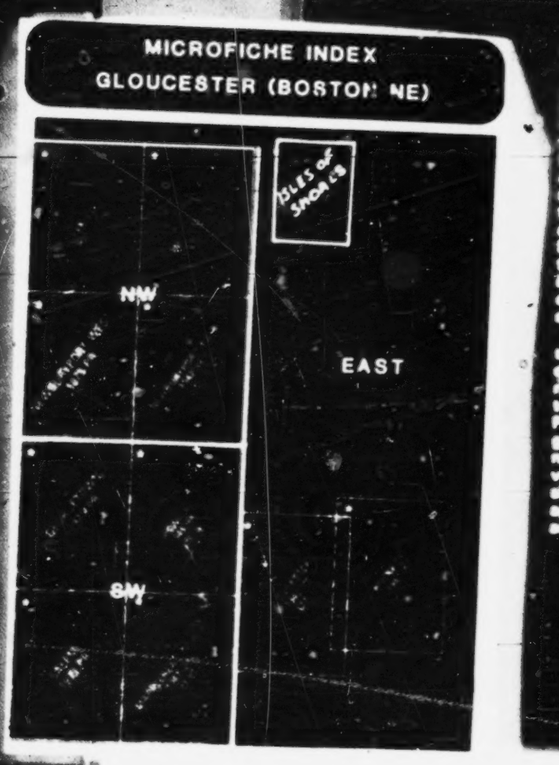


MODIFYING TERMS

In order to more adequately describe wetland and aquatic habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

WATER REGIME(S)				WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS	
A Temporary	H Permanent	N Seasonal		Coastal Salinity	Inland Salinity	pH Modifiers for all Regime Classes	1 Organic	b Beaver	h Diked/Impounded
B Saturated	J Intermittently Exposed	P Permanent		4 Hypersaline	4 Hypersaline	5 Acid	2 Mineral	f Farmed	x Excavated
C Seasonal	K Artificially Flooded	R Semipermanent		3 Euhaline	3 Mixosaline	6 Circumneutral		r Artificial Substrate	
E Saturated/Semipermanent/Seasonal				2 Mixohaline (Brackish)	2 Mixosaline	7 Alkaline		s Spoil	
F Intermittently Flooded				1 Polyhaline	1 Fresh				

Information on the water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

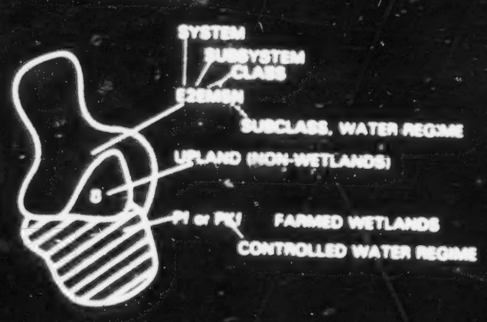


SPECIAL NOTE

This document was prepared primarily by stereoscopic analysis of high altitude color infrared imagery. Wetlands were identified on the photographs based on vegetation, visible moisture, and properties associated with Cowardin, et al. Classification of Wetlands and Deepwater Habitats of the United States (An Operational Draft), Cowardin, et al. 1977. This would photographic imagery utilizes conditions during the growing year and season when they were taken. In addition, there is a margin of error inherent in the use of this aerial photography. Thus, a detailed on the ground and laboratory examination of a single site may result in a revision of the wetland boundaries established through photointerpretation. In addition, some small wetlands and those obscured by dense forest cover may not be included on this document.

Federal, State and local regulatory agencies with jurisdiction over wetlands may define and delineate wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, State or local government or to establish the precise limits of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, State or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

SYMBOLOGY EXAMPLE



NOTES TO THE USER

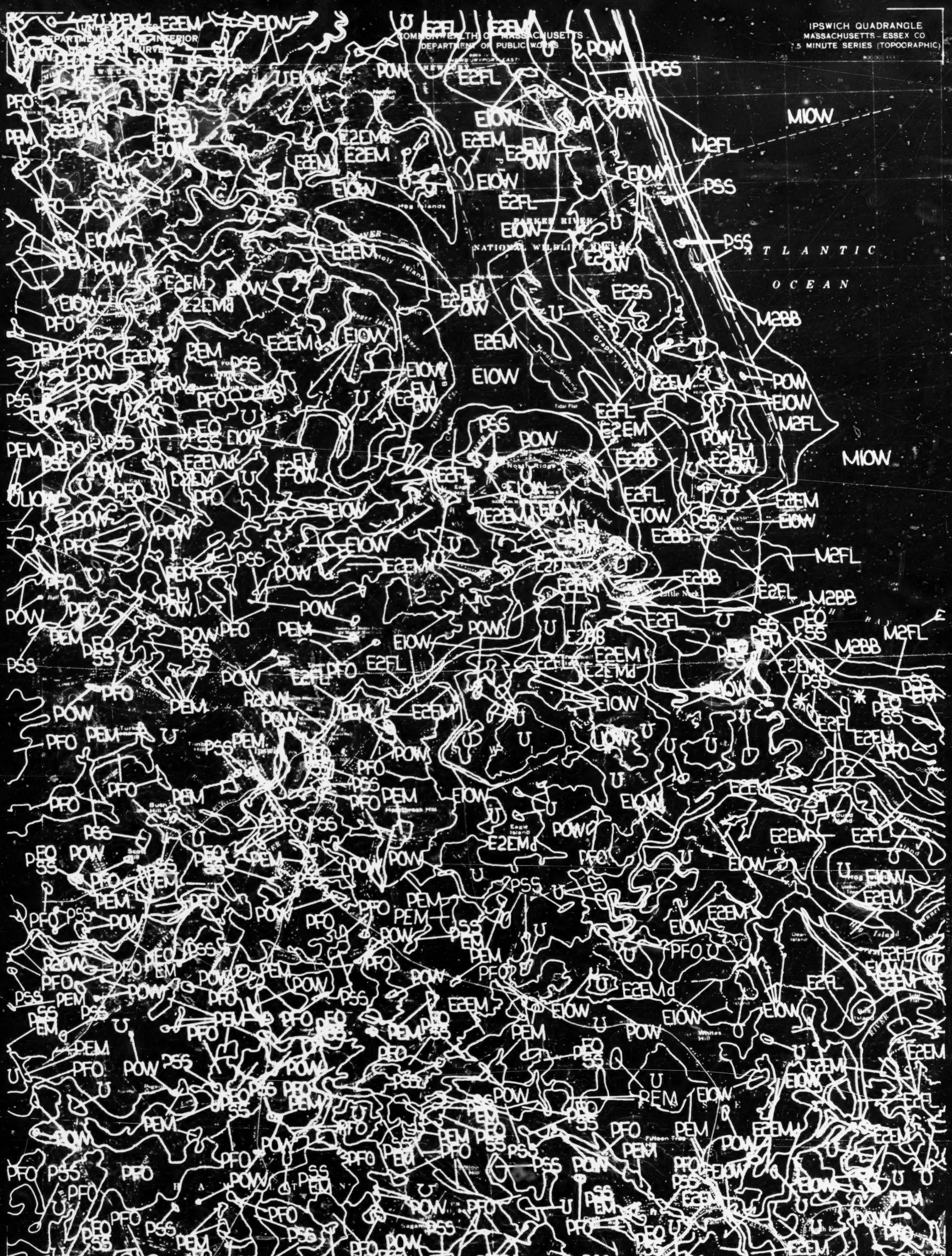
- Wetlands which have been field examined are indicated on the map by an asterisk (*).
- Dominant types (either vegetative or sedentary animal) can be added to the map by the interested user.
- Additions or corrections to the wetlands information displayed on this map are solicited. Please forward such information to the address indicated.

3 7 9 3 5 8

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

IPSWICH QUADRANGLE
MASSACHUSETTS - ESSEX CO
7.5 MINUTE SERIES (TOPOGRAPHIC)

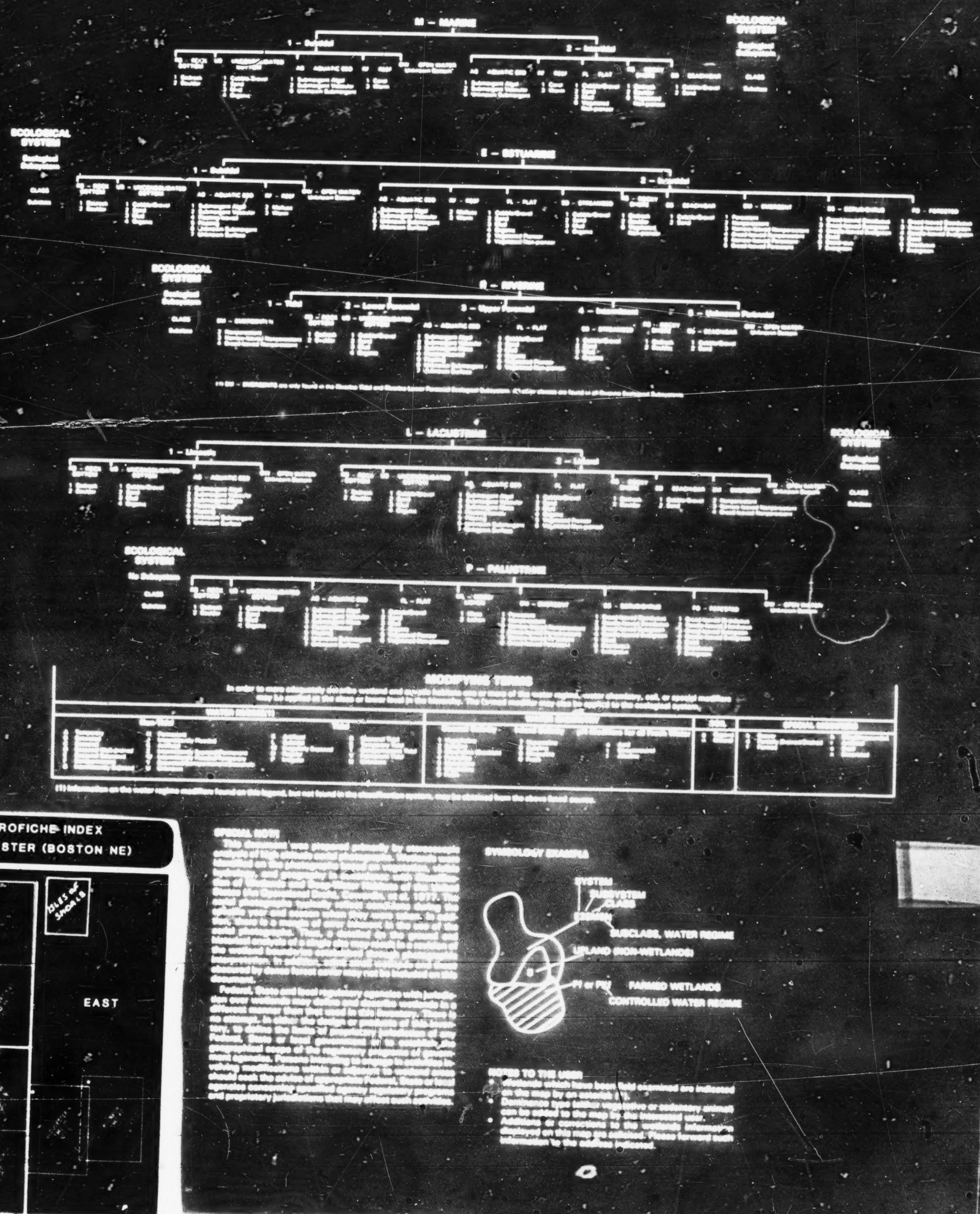


BOSTON N E
GLOUCESTER

SPECIAL NOTE

IPSWICH, MASS.

WETLAND LEGEND



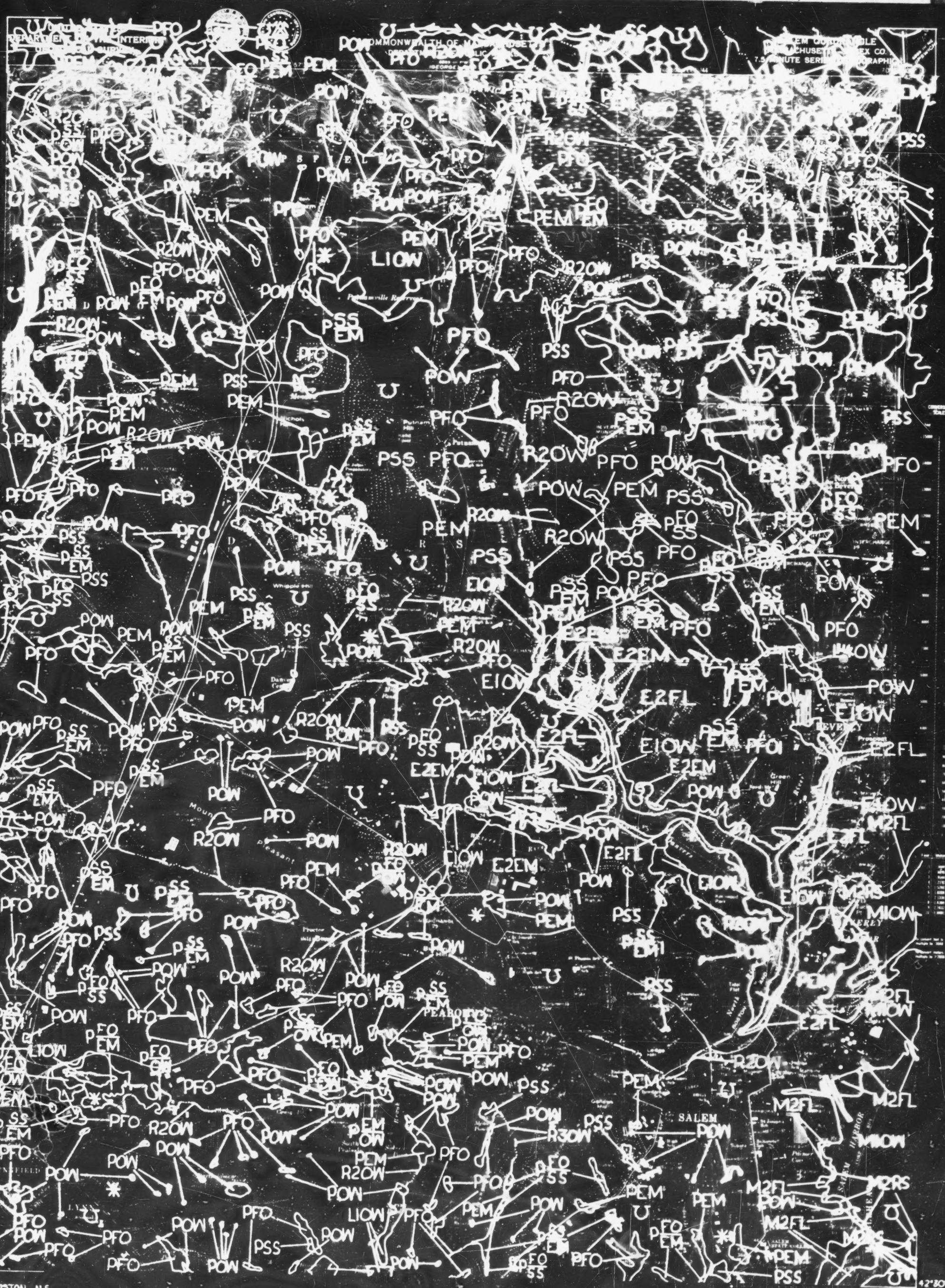
SPECIAL NOTE

HYDROLOGY MODIFIER

NOTES TO THE USER

379.359

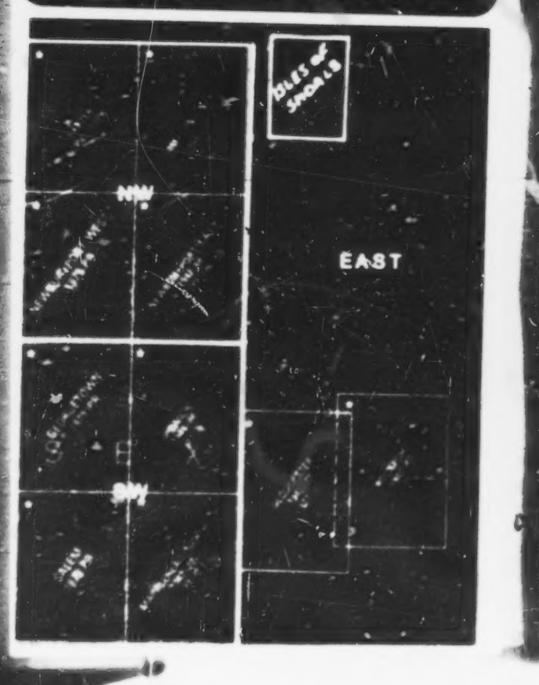
NATIONAL WETLANDS INVENTORY



C-3

WETLAND LEGEND

MICROFICHE INDEX
GLOUCESTER (BOSTON NE)



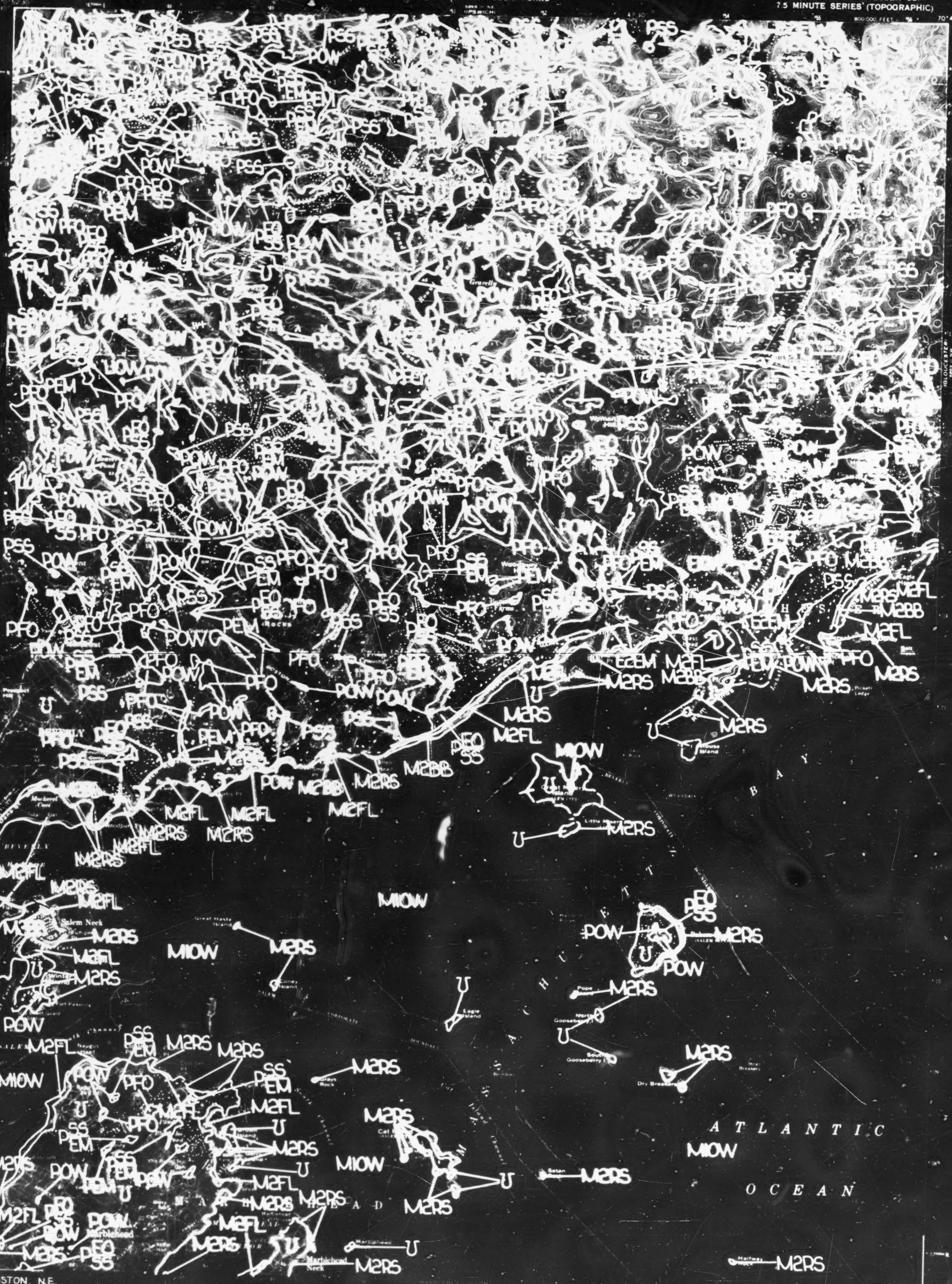
379 360

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

MARBLEHEAD NORTH QUADRANGLE
MASSACHUSETTS—ESSEX CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

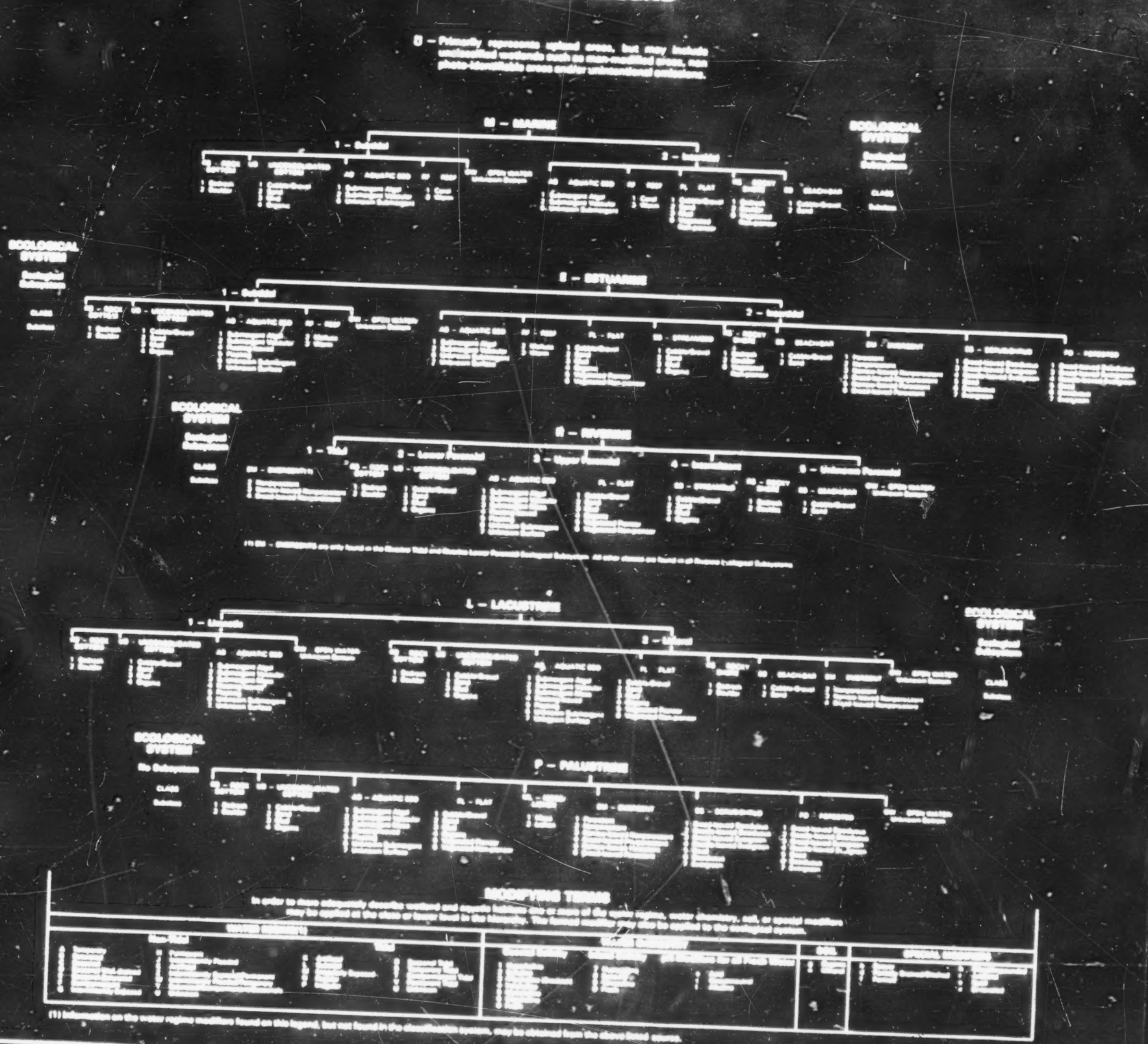


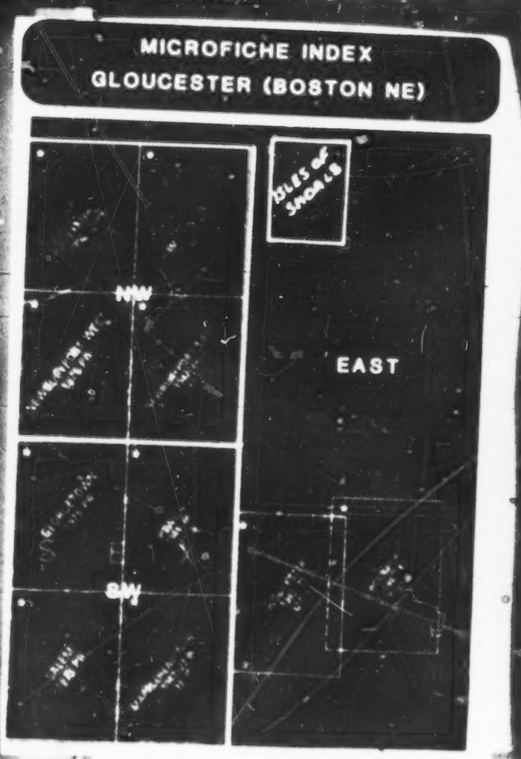
BOSTON, N.E.
GLOUCESTER

70°45'

MARBLEHEAD NORTH, MASS.

WETLAND LEGEND





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